

OUTPUT-COMPENSATED BUFFERS WITH SOURCE-FOLLOWER INPUT STRUCTURE, METHODS OF OPERATING SAME, AND IMAGE CAPTURE DEVICES USING SAME

Abstract of the Disclosure

5NS
AB

An output-compensated buffer includes a buffer circuit that receives an input signal and produces an output signal responsive thereto at an output terminal, the buffer circuit including an input source-follower circuit that receives the input signal. A feedback circuit is connected to the output terminal and to the input source follower circuit and operative to vary an input capacitance of the source follower circuit responsive to the output signal at the output terminal. The input source follower circuit preferably comprises a bias terminal coupled to a power source, and the feedback circuit is preferably capacitively coupled to the bias terminal. According to another aspect, an image capture device includes a charged coupled device (CCD) that generates a video signal. A buffer circuit is responsive to the CCD and operative to receive the video signal and produce an output signal responsive thereto at an output terminal, the buffer circuit including an input source-follower circuit that receives the video signal. A feedback circuit is connected to the output terminal and to the input source follower circuit and operative to vary an input capacitance of the source follower circuit responsive to the output signal at the output terminal.